

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-12. **(Canceled)**

13. **(Currently amended)** A cycle-based communication system ~~(1)~~ for transmitting useful data ~~(DATA)~~ between users ~~(3)~~ of the system ~~(1)~~, including a data bus ~~(2)~~ and the users ~~(3)~~ connected to it, in which the data transmission is effected within cyclically repeating timeframes ~~(4)~~ with at least two timeslots ~~(5)~~ each, and each timeslot ~~(5)~~ is intended for transmitting one message ~~(Ni)~~, one message ~~(Ni)~~ contains at least some of the useful data ~~(DATA)~~, and each message ~~(Ni)~~ is assigned an identifier ~~(ID)~~, characterized in that the identifier ~~(ID)~~ is stored in each message ~~(Ni)~~ as part of the message ~~(Ni)~~; that each message ~~(Ni)~~ additionally includes data about the cycle; that the timeslots ~~(5)~~ have a fixed length; and that at least one of the timeslots ~~(5)~~ of one timeframe ~~(4)~~ can be used, in various cycles, for offset transmission of different messages ~~(Ni)~~ that are not intended for transmission in every cycle.

14. **(Previously presented)** The communication system of claim 13, wherein the data about the cycle pertain to current cycle.

15. **(Previously presented)** The communication system of claim 14, wherein the data pertaining to the current cycle include an ordinal number of the cycle.

16. **(Previously presented)** The communication system of claim 13, wherein each message is additionally assigned time data that pertain to a timeslot and that can be learned from the identifier.

17. **(Previously presented)** The communication system of claim 14, wherein each message is additionally assigned time data that pertain to a timeslot and that can be learned from the identifier.

18. **(Previously presented)** The communication system of claim 15, wherein each message is additionally assigned time data that pertain to a timeslot and that can be learned from the identifier.

19. **(Previously presented)** The communication system of claim 16, wherein the time data include data about the chronological position of a timeslot within a timeframe.

20. **(Currently amended)** A method for transmitting useful data (~~DATA~~) in a cycle-based communication system (1) between users (4) of the system (1) via a data bus (2), to which the users (3) are connected, in which the useful data (~~DATA~~) are transmitted within

cyclically repeating timeframes (4) each with at least two timeslots (5), and in each timeslot (5) one message (Ni) is transmitted, at least some of the useful data (DATA) are stored in memory in a message (Ni), and each message (Ni) is assigned an identifier (ID), wherein the messages (Ni) are transmitted in timeslots (5) of fixed length; that the identifier (ID) is stored in memory in the message (Ni) as part of the message (Ni); that in each message (Ni), data about the cycle are stored in memory; that in at least one of the timeslots (5) of a timeframe (4), different messages (Ni) are transmitted offset from one another in various cycles, and in the at least one timeslot (5), those messages (Ni) that are not intended for transmission in every cycle are transmitted offset from one another.

21. **(Currently amended)** The transmission method of claim 20, wherein the users (3) of the communication system (1) are each allocated at least one predeterminable timeslot (5) of the timeframes (4) for data transmission.

22. **(Currently amended)** The transmission method of claim 20, wherein data pertaining to the current cycle are additionally stored in memory in each message (Ni).

23. **(Currently amended)** The transmission method of claim 21, wherein data pertaining to the current cycle are additionally stored in memory in each message (Ni).

24. **(Currently amended)** The transmission method of claim 22, wherein the cycle data are stored in memory in a message (~~Ni~~) as part of the identifier (~~ID~~) of that message.

25. **(Currently amended)** The transmission method of claim 22, wherein the messages (~~Ni~~) transmitted over the data bus (~~2~~) in the timeslots (~~5~~) of the timeframes (~~4~~) are observed by the users (~~3~~) of the communication system (~~1~~); that the identifiers (~~ID~~) and the cycle data of the messages (~~Ni~~) are compared with predeterminable values, stored in memories of the observing users (~~3~~), for the identifier (~~ID~~) and the cycle data, and at least the useful data (~~DATA~~) of a transmitted message (~~Ni~~) are received by the user (~~3~~) only if the identifier (~~ID~~) and the cycle data of the message (~~Ni~~) match the predeterminable values, stored in the memory of the user, for the identifier (~~ID~~) and the cycle data.

26. **(Currently amended)** The transmission method of claim 23, wherein the messages (~~Ni~~) transmitted over the data bus (~~2~~) in the timeslots (~~5~~) of the timeframes (~~4~~) are observed by the users (~~3~~) of the communication system (~~1~~); that the identifiers (~~ID~~) and the cycle data of the messages (~~Ni~~) are compared with predeterminable values, stored in memories of the observing users (~~3~~), for the identifier (~~ID~~) and the cycle data, and at least the useful data (~~DATA~~) of a transmitted message (~~Ni~~) are received by the user (~~3~~) only if the identifier (~~ID~~) and the cycle data of the message (~~Ni~~) match the predeterminable values, stored in the memory of the user, for the identifier (~~ID~~) and the cycle data.

27. **(Currently amended)** The transmission method of claim 22, wherein the data traffic on the data bus (2) of the communication system (1) is observed; the current cycle data are monitored by the users (3); and a message (N_i) is sent by a user (3) in a predeterminable timeslot (5) only if the current cycle data match a predeterminable value, stored in a memory of the user (3), for the cycle data.

28. **(Currently amended)** The transmission method of claim 23, wherein the data traffic on the data bus (2) of the communication system (1) is observed; the current cycle data are monitored by the users (3); and a message (N_i) is sent by a user (3) in a predeterminable timeslot (5) only if the current cycle data match a predeterminable value, stored in a memory of the user (3), for the cycle data.

29. **(Currently amended)** The transmission method of claim 24, wherein the data traffic on the data bus (2) of the communication system (1) is observed; the current cycle data are monitored by the users (3); and a message (N_i) is sent by a user (3) in a predeterminable timeslot (5) only if the current cycle data match a predeterminable value, stored in a memory of the user (3), for the cycle data.

30. **(Currently amended)** The transmission method of claim 25, wherein the data traffic on the data bus (2) of the communication system (1) is observed; the current cycle data are monitored by the users (3); and a message (N_i) is sent by a user (3) in a predeterminable

timeslot (5) only if the current cycle data match a predeterminable value, stored in a memory of the user (3), for the cycle data.

31. **(Currently amended)** The transmission method of claim 26, wherein the data traffic on the data bus (2) of the communication system (1) is observed; the current cycle data are monitored by the users (3); and a message (N_i) is sent by a user (3) in a predeterminable timeslot (5) only if the current cycle data match a predeterminable value, stored in a memory of the user (3), for the cycle data.